EA Form R 1/2007

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Attn: Patty Rector (Office Manager)
County Commissioners Office
Missoula County
200 W Broadway
Missoula, MT 59802

2. Type of action: Application For Beneficial Water Use Permit No. 76H 30051779

3. Water source name: Groundwater, Missoula Valley Aquifer

4. Location affected by project: E2 Section 31, T13N R19W, Missoula County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: Larchmont proposes to increase the flow rate of water curently diverted using three wells under the authority of Provisional Permit No. 76H 11085 00 by 1070 gallons per minute (GPM). Currently, the Applicant can pump 1250 GPM from well nos. 2, 3 and 4, in addition to another 80 GPM from a fourth well under the authority of Provisional Permit No. 76H 115949, which is manifold into the system. No flow rate increase is proposed for the fourth well, which is used to maintain system pressure. Well Nos. 2, 3 and 4 are constructed to depths of 120, 120 and 81 feet and will divert water at rates of 1200, 1000 and 120 GPM, respectively. These wells are currently pumped at 670, 500 and 80 GPM, respectively. Water will continue to be diverted from the Missoula Valley Aquifer by means of three new pumps (125, 100 and 15 hp) with Variable Frequency Drives, providing a combined flow rate of 2320 GPM (1200 GPM + 1000 GPM + 120 GPM = 2320 GPM). Total diverted volume will remain unchanged at 319.5 acre-feet (AF) for the purpose of irrigation of the 146.8 acre place of use, from April 1st to October 31st; 295.5 AF from Provisional Permit No. 76H 11085 00 and 24 AF from Provisional Permit No. 76H 115949 00. Total flow rate from the four manifold wells will be 2400 GPM; 1250 GPM from Provisional Permit No. 76H 11085 00, 80 GPM from 76H 115949 00, and 1070 GPM requested in this Application for Beneficial Water Use Permit No. 76H 30051779 (1250 GPM + 80 GPM + 1070 GPM = 2400 GPM).. The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Natural Heritage Program	Species of Concern
Montana Department of Fish, Wildlife and Parks	2005 Dewatered Stream List
Montana Department of Environmental Quality	303(d) list of impaired streams

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Bitterroot River, north of Stevensville and prior to its confluence with the Clark Fork River, is not listed on the 2005 Department of Fish, Wildlife and Parks Impaired Stream List. The application is for increased pumping rates from the Missoula Valley Aquifer from a series of 3 wells with no increase in volume or consumptive use from the two permits that the Applicant is currently irrigating under. The aquifer is considered to be hydraulically connected to the Bitterroot River at the point where the pumping will occur. The appropriation of 1070 GPM up to 0 AF will not cause dewatering in the Bitterroot River as the Applicant will not be increasing the total volume diverted or consumed.

Determination: No impact.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The Montana Department of Environmental Quality lists the Bitterroot River from Eightmile Creek to the mouth (Clark Fork River) as fully supporting agriculture, drinking water and primary contact recreation; the Bitterroot in this stretch is identified as not supporting aquatic life. Probable sources of these impairments include alteration in stream-side or littoral vegetative covers, copper, lead, nitrogen/nitrate, sedimentation/siltation, and temperature/water.

The Applicant's proposed increased pumping rate from the Missoula Valley Aquifer which is hydraulically connected to the Bitterroot River in this stretch will not have an increased impact on water quality. The irrigation system will not require an increase in total diverted volume and the proposed use will not increase overall consumptive volumes from that which has historically been used.

Determination: No impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The Applicant analyzed groundwater flux throughout the zone of influence, as modeled under a forward projection run for a period of five years. The hydrogeologic assessment predicted no net depletion to the Bitterroot River or its tributaries.

Determination: No impact

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Applicant proposes to modify three existing points of diversion by installing new variable frequency ultra-efficiency irrigation pumps in wells No. 2 and 3, increasing the maximum flow rate from 1250 GPM to 2320 GPM. The variable frequency drive (VFD), radio telemetry communication, and new electronic flow meters will generate tighter control of the irrigation supply wells, allowing the Applicant to mitigate for adverse effects to other water users if a call for water is placed. After modeling groundwater flux throughout the zone of influence, it was determined that the projected drawdown of less than 1-foot would not cause adverse effect to existing groundwater users.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program (MNHP) was contacted to determine if there are any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern", that could be impacted by the proposed project.

The MNHP identified the following animal species: Great Blue Heron, Bald Eagle, Lewis's Woodpecker, Pileated Woodpecker, Bobolink, Cassin's Finch, Westslope Cutthroat Trout, Bull Trout, Fringed Myotis, Hoary Bat, Western Skink, and a Subterranean Amphipod. In addition, the following sensitive plant species was also identified: Toothcup.

The location of the proposed groundwater appropriation is approximately 1.5 miles northeast of the Bitterroot River in Section 31, T13N, R19W, Missoula County. Any impact to the above listed sensitive species has likely already occurred as a result of pumping Provisional Permit Nos. 76H-11085-00 and 76H-115949-00. Due to the source being groundwater, no request for additional volume or consumptive use, and the location of the golf course in a developed area within Missoula city limits, it is unlikely that any additional impacts will occur as a result of increased pumping rates.

Determination: No significant impact.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: N/A; project does not involve wetlands.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: N/A; project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Use of water from the Missoula Valley Aquifer for continued irrigation at the Larchmont Golf Course will not cause degradation of soil quality or stability. The soils at Larchmont Golf Course are nonsaline and thus, not susceptible to saline seep.

Determination: No impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

The proposed increase in pumping rates at three existing wells will not impact existing vegetative cover and will not result in increased establishment or spread of noxious weeds.

Determination: No impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Adverse air quality impacts from increased air pollutants are not expected as a result of this project. The water will be diverted from three existing wells.

Determination: No impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands.*

NA: Project not located on State or Federal Lands.

Determination: No impact.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

All impacts to land, water, and energy have been identified and no additional impacts are anticipated.

Determination: No impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is located in an area with no locally adopted environmental plans.

Determination: No impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit or impair access to recreational opportunities currently available in the area. Increased pumping rates will alter playing conditions at the golf course by decreasing the amount of time needed to irrigate the playing area, providing a more desirable playing surface for guests.

Determination: No impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The project does not pose a significant risk to the human health.

Determination: No impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**XX**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: No impact.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* None identified.

(b) *Local and state tax base and tax revenues?* None identified.

(c) *Existing land uses?* None identified.

(d) *Quantity and distribution of employment?* None identified.

(e) *Distribution and density of population and housing?* None identified.

(f) *Demands for government services?* None identified.

(g) *Industrial and commercial activity?* None identified.

(h) *Utilities?* None identified.

(i) *Transportation?* None identified.

(j) *Safety?* None identified.

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts None identified.

Cumulative Impacts None identified.

3. *Describe any mitigation/stipulation measures:*

No reasonable alternatives were identified in the EA.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

PART III. Conclusion

1. Preferred Alternative None identified.

2 Comments and Responses

3. ***Finding:***
Yes___ No **XX**___ *Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

AN EA IS THE APPROPRIATE LEVEL OF ANALYSIS FOR THE PROPOSED ACTION BECAUSE NO SIGNIFICANT IMPACTS WERE IDENTIFIED.

Name of person(s) responsible for preparation of EA:

Name: Amy Groen
Title: Water Resource Specialist
Date: June 28, 2012